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10/695,444	10/29/2003	Daniel Massicotte	14730-1US CMB/AA/mb	4564

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EXAMINER	
ETTEHADIEH, ASLAN	
ART UNIT	**PAPER NUMBER**
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/695,444	MASSICOTTE ET AL.	
	Examiner	Art Unit	
	Aslan Ettehadieh	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☒ Claim(s) *33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 08/24/2004 discloses minor errors:

2. Disclosure of line 1 is referring to inventor as Motttier instead of Mottier and reference number is not 2002/072336, it is 2002/0072336. Disclosure of line 2 the reference number is not 2002/045462, it is 2002/0045462. Accordingly, the information disclosure statement is being considered by the examiner.

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

4. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. The term "signature filter" in claims 6, 8, 16 – 17, 22, 28 – 33, is a relative term which renders the claim indefinite. The term " signature filter " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The applicant's disclosure points to E. S. L. Miller, "An Adaptive Direct-Sequence Code-Division Multiple-Access Receiver for Multiuser Interference Rejection", IEEE Transactions on Communications, Vol. 43, No. 2/3/4, 1995, pp. 1746-1755. as defining the signature filter, however Miller never mentions a "signature filter". Miller discloses a match filter type without suggestion of a signature filter.

7. Claims 1 – 33 replete with a numerous 35 U.S.C. 112 second paragraph problems. There is insufficient antecedent basis for limitations in the claim. A few examples are provided here:

8. Regarding claim 3, claim 3 recites the limitation "a transmitted communication channel signal". There is insufficient antecedent basis for this limitation in the claim.

9. Regarding claim 3, claim 3 recites the limitation " a plurality of estimated user signals ".. There is insufficient antecedent basis for this limitation in the claim.

10. Regarding claim 3, claim 3 recites the limitation "the chip rate". There is insufficient antecedent basis for this limitation in the claim.

11. Regarding claim 3, claim 3 recites the limitation "the symbol rate". There is insufficient antecedent basis for this limitation in the claim.

12. Regarding claim 4, claim 4 recites the limitation "a transmitted communication channel signal". There is insufficient antecedent basis for this limitation in the claim.

13. Regarding claim 4, claim 4 recites the limitation " a plurality of estimated user signals ". There is insufficient antecedent basis for this limitation in the claim.

14. Regarding claim 18, claim 18 recites the limitation "a transmitted communication channel signal". There is insufficient antecedent basis for this limitation in the claim.

15. Regarding claim 18, claim 18 recites the limitation " a plurality of estimated user signals ". There is insufficient antecedent basis for this limitation in the claim.

Applicant's attention for carefully reviewing pending claims for such other indefiniteness.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by E. S. L. Miller, "An Adaptive Direct-Sequence Code-Division Multiple-Access Receiver for Multiuser Interference Rejection", IEEE Transactions on Communications, Vol. 43, No. 2/3/4, 1995, pp. 1746-1755.

17. Regarding claim 1, Miller discloses an adaptable multiuser processing unit providing a plurality of estimated user signals for each user communication signal of a transmitted communication channel signal in a multi-access network, comprising: a processor receiving the transmitted communication channel signal and providing said plurality of estimated user signals in accordance with control parameters being modified by an error feedback signal having a plurality of components, each of the plurality of components being related to said estimated user signal (figure 1, abstract, section II; where weights are being interpreted as control parameters as seen in applicant specification, paragraph 91 of Massicotte et al. US 2004/0136444); and a feedback unit receiving and comparing the plurality of estimated user signals for each user and providing the error feedback signal to the processor (figure 1, abstract, section II)

18. Claims 1, 2, 4, 6, 8, 9, 11, 13, 15, 17, 20, 22, 24, 26, 27 are rejected under 35 U.S.C. 102(a) as being anticipated by Xia et al. (US 2002/0097795).

19. Regarding claim 1, Xia discloses an adaptable multiuser processing unit providing a plurality of estimated user signals for each user communication signal of a transmitted communication channel signal in a multi-access network, comprising: a processor receiving the transmitted communication channel signal and providing said plurality of estimated user signals in accordance with control parameters being modified by an error feedback signal having a plurality of components, each of the plurality of components being related to said estimated user signal (figures 2, 3, paragraphs 5, 9, 11, 28, 29; where in a multiple transmitter system it is known that each antenna can be assigned to each user in that system and where weights are being interpreted as control parameters as seen in applicant specification, paragraph 91 of Massicotte et al. US 2004/0136444); and a feedback unit receiving and comparing the plurality of estimated user signals for each user and providing the error feedback signal to the processor (figures 2, 3, paragraphs 5, 9, 11, 28, 29).

20. Regarding claim 2, Xia further discloses wherein the processor is a symbol detection unit providing a plurality of symbols, further wherein the feedback unit receives and compares the plurality of symbols for each user and provides the error feedback signal to the symbol detection unit (figures 2, 3 elements 226, paragraphs 9, 10; where the decision function is a comparative function).

21. Regarding claim 4, Xia further discloses wherein the processor comprises a first filter unit receiving a transmitted communication channel signal and providing a plurality

of estimated user signals, further comprising a symbol detection unit receiving the plurality of estimated user signals and providing a plurality of symbols for each user, the feedback unit receiving and comparing at least the plurality of estimated user signals with the plurality of estimated symbols for each user to provide the error feedback signal to the first filter unit (figures 2, 3 elements 226, paragraphs 9, 10; where the decision function is a comparative function).

22. Regarding claim 6, Xia further discloses wherein the first filter unit is a signature filter (paragraphs 28, 29; where a match filter is being interpreted as a signature filter).

23. Regarding claim 8, Xia further discloses wherein the feedback unit receives and compares at least the plurality of estimated user signals with a training sequence signal provided by a training sequence generator to provide the error feedback signal to the signature filter (figures 2, 3, paragraph 29).

24. Regarding claim 9, Xia further discloses wherein the feedback unit receives at least a training sequence signal provided by a training sequence generator and provides the error feedback signal to the symbol detection unit (figures 2, 3, paragraph 29).

25. Regarding claim 11, Xia further discloses wherein the processor further comprises a second filter unit receiving the plurality of estimated user signals and providing a plurality of filtered estimated signals for each user, further wherein the symbol detection unit receives the plurality of filtered estimated signals for each user and provides a plurality of estimated symbols for each user, the feedback unit receiving and comparing at least the plurality of symbols for each user to provide the error

feedback signal to the first filter unit (figures 2, 3, elements 222, 224, paragraphs 5, 9, 11, 28, 29).

26. Regarding claim 13, Xia further discloses wherein the feedback unit further provides the error feedback signal to the second filter unit (figure 3).

27. Regarding claim 15, Xia further discloses wherein the first filter unit comprises an equalizer filter (figure 3, paragraph 28; where it is well known at the time the invention was made that elements 222 and 224 belonging to a decision feedback equalizer are known as feedforward equalizers and feedback equalizers).

28. Regarding claim 17, Xia further discloses wherein the second filter unit comprises a signature filter (figure 3, paragraph 28).

29. Regarding claim 20, Xia discloses further wherein the first filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2, 3, paragraphs 9 – 10, where the plurality of decision amplitudes are being interpreted as the plurality of decision parameters).

30. Regarding claim 22, Xia discloses further wherein said signature filter comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2, 3, paragraphs 9 – 10, where the plurality of decision amplitudes are being interpreted as the plurality of decision parameters).

31. Regarding claim 24, Xia discloses further wherein anyone of the first filter unit and of the second filter unit comprises a decision feedback module receiving the

plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2, 3, paragraphs 9 – 10, where the plurality of decision amplitudes are being interpreted as the plurality of decision parameters).

32. Regarding claim 26, Xia further discloses wherein any one of the first filter unit and of the second filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2, 3, paragraphs 9 – 10, where the plurality of decision amplitudes are being interpreted as the plurality of decision parameters).

33. Regarding claim 27, Xia discloses further wherein said symbol detection unit further comprises a decision feedback module receiving the plurality of symbols for each user and comprising a plurality of decision parameters for each user (figures 2, 3, paragraphs 9 – 10).

34. Claims 1 – 32 are rejected under 35 U.S.C. 102(a) as being anticipated by Mottier (US 20020072336).

35. Regarding claim 1, Mottier discloses an adaptable multiuser processing unit providing a plurality of estimated user signals for each user communication signal of a transmitted communication channel signal in a multi-access network, comprising: a processor receiving the transmitted communication channel signal and providing said plurality of estimated user signals in accordance with control parameters being modified by an error feedback signal having a plurality of components, each of the plurality of components being related to said estimated user signal (figures 2 – 6, paragraphs 41 –

55; where weights are being interpreted as control parameters as seen in applicant specification, paragraph 91 of Massicotte et al. US 2004/0136444); and a feedback unit receiving and comparing the plurality of estimated user signals for each user and providing the error feedback signal to the processor (figures 2 – 6, paragraphs 41 – 55).

36. Regarding claim 2, Mottier further discloses wherein the processor is a symbol detection unit providing a plurality of symbols, further wherein the feedback unit receives and compares the plurality of symbols for each user and provides the error feedback signal to the symbol detection unit (figures 2 – 6 elements 210, 310, paragraphs 6 – 10, 41 – 55; where it is well known at the time the invention was made that detection uses a comparative function).

37. Regarding claim 3, Mottier further discloses wherein said processor comprises a first filter unit receiving a transmitted communication channel signal and providing a plurality of estimated user signals (figures 2 – 6, paragraphs 41 – 55), further comprising a de-spreader unit receiving the plurality of estimated user signals at the chip rate of the processor and providing a plurality of estimated symbols for each user at a given symbol rate (figures 2 – 6, paragraphs 2, 8, 41 – 55) and a symbol detection unit receiving the plurality of estimated user signals at the symbol rate and providing a plurality of estimated symbols for each user, the feedback unit receiving and comparing at least the plurality of estimated user signals at the symbol rate with the plurality of estimated symbols for each user to provide the error feedback signal at the chip rate to the first filter unit (figures 2 – 6 elements 210, 310, paragraphs 6 – 10, 41 – 55; where it

is well known at the time the invention was made that detection uses a comparative function and where a chip rate, given symbol rate, and symbol rate would be inherent).

38. Regarding claim 4, Mottier further discloses wherein the processor comprises a first filter unit receiving a transmitted communication channel signal and providing a plurality of estimated user signals, further comprising a symbol detection unit receiving the plurality of estimated user signals and providing a plurality of symbols for each user, the feedback unit receiving and comparing at least the plurality of estimated user signals with the plurality of estimated symbols for each user to provide the error feedback signal to the first filter unit (figures 2 – 6 elements 210, 310, paragraphs 6 – 10, 41 – 55; where it is well known at the time the invention was made that detection uses a comparative function).

39. Regarding claim 5, Mottier further discloses wherein the first filter unit is an equalizer filter (paragraphs 122, 125, 127).

40. Regarding claim 6, Mottier further discloses wherein the first filter unit is a signature filter (paragraphs 2 – 5, 8).

41. Regarding claim 7, Mottier further discloses wherein the feedback unit receives and compares at least the plurality of estimated user signals with a training sequence signal provided by a training sequence generator to provide the error feedback signal to the equalizer filter (figures 2 – 6 elements qk, paragraph 55; where element qk is being interpreted as a training sequence).

42. Regarding claim 8, Mottier further discloses wherein the feedback unit receives and compares at least the plurality of estimated user signals with a training sequence

signal provided by a training sequence generator to provide the error feedback signal to the signature filter (figures 2 – 6 elements qk, paragraph 55; where element qk is being interpreted as a training sequence).

43. Regarding claim 9, Mottier further discloses wherein the feedback unit receives at least a training sequence signal provided by a training sequence generator and provides the error feedback signal to the symbol detection unit (figures 2 – 6 elements qk, paragraph 55; where element qk is being interpreted as a training sequence).

44. Regarding claim 10, Mottier further discloses wherein the processor further comprises a second filter unit receiving the plurality of estimated user signals and providing a plurality of filtered estimated signals for each user, further wherein the symbol detection unit receives the plurality of filtered estimated signals for each user and provides a plurality of estimated symbols for each user, the feedback unit receiving and comparing at least the plurality of symbols for each user to provide the error feedback signal to the first filter unit (figures 2 – 6, paragraphs 6 – 10, 41 – 55).

45. Regarding claim 11, Mottier further discloses wherein the processor further comprises a second filter unit receiving the plurality of estimated user signals and providing a plurality of filtered estimated signals for each user, further wherein the symbol detection unit receives the plurality of filtered estimated signals for each user and provides a plurality of estimated symbols for each user, the feedback unit receiving and comparing at least the plurality of symbols for each user to provide the error feedback signal to the first filter unit (figures 2 – 6, paragraphs 6 – 10, 41 – 55).

46. Regarding claim 12, Mottier further discloses wherein the feedback unit further provides the error feedback signal to the second filter unit (figures 2 – 6, paragraphs 6 – 10, 41 – 55).

47. Regarding claim 13, Mottier further discloses wherein the feedback unit further provides the error feedback signal to the second filter unit (figures 2 – 6, paragraphs 6 – 10, 41 – 55).

48. Regarding claim 14, Mottier further discloses wherein the first filter unit comprises an equalizer filter (figures 2 – 6, paragraphs 122, 125 – 127).

49. Regarding claim 15, Mottier further discloses wherein the first filter unit comprises an equalizer filter (figures 2 – 6, paragraphs 122, 125 – 127).

50. Regarding claim 16, Mottier further discloses wherein the second filter unit comprises a signature filter (paragraphs 2 – 5, 8).

51. Regarding claim 17, Mottier further discloses wherein the second filter unit comprises a signature filter (paragraphs 2 – 5, 8).

52. Regarding claim 18, Mottier further discloses wherein the processor comprises a plurality of filter units, each receiving a transmitted communication channel signal and each providing a plurality of estimated user signals to a combining unit, the combining unit providing a plurality of estimated combined user signals, further comprising a symbol detection unit receiving the plurality of estimated combined user signals and providing a plurality of symbols for each user, the feedback unit receiving and comparing at least the plurality of symbols for each user to provide the error feedback signal to each of the plurality of filter units (figures 2 – 6 elements 210, 310, paragraphs

6 – 10, 41 – 55; where it is well known at the time the invention was made that detection uses a comparative function).

53. Regarding claim 19, Mottier further discloses wherein the first filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

54. Regarding claim 20, Mottier further discloses wherein the first filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

55. Regarding claim 21, Mottier further discloses wherein the equalizer filter comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

56. Regarding claim 22, Mottier discloses further wherein said signature filter comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

57. Regarding claim 23, Mottier discloses wherein anyone of the first filter unit and of the second filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

58. Regarding claim 24, Mottier discloses wherein anyone of the first filter unit and of the second filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

59. Regarding claim 25, Mottier discloses wherein any one of the first filter unit and of the second filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

60. Regarding claim 26, Mottier discloses wherein any one of the first filter unit and of the second filter unit comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 2 – 6, paragraphs 72, 122, 125 – 127).

61. Regarding claim 27, Mottier discloses further wherein said symbol detection unit further comprises a decision feedback module receiving the plurality of symbols for each user and comprising a plurality of decision parameters for each use (figures 2 – 6, paragraphs 72, 122, 125 – 127).

62. Regarding claim 28, Mottier further discloses wherein the signature filter comprises at least one fractionally-spaced signature filter (paragraph 43 – 44; where 1 – k is being interpreted as a fractionally-spaced signature filter).

63. Regarding claim 29, Mottier discloses further comprising a combiner receiving a plurality of transmitted communication signals and providing a combined transmitted communication signal to said signature filter (figures 1 – 6, paragraphs 48, 51).

64. Regarding claim 30, Mottier discloses further comprising an oversampling unit comprising an oversampler and a combiner, said oversampler receiving the transmitted communication signal and providing a plurality of oversampled communication signals to the combiner, the combiner further providing a combined transmitted communication signal to said signature filter (figures 1 – 8, paragraph 122; where different sampling times is being interpreted as including oversampling).

65. Regarding claim 31, Mottier further discloses wherein each of the plurality of filter units is a fractionally-spaced signature filter, further wherein said symbol detection unit further comprises a decision feedback module receiving the plurality of symbols for each user and comprising a plurality of decision parameters for each user, further wherein each of said fractionally-spaced signature filter comprises a decision feedback module receiving the plurality of estimated user signals and comprising a plurality of decision parameters for each user (figures 1 – 6, paragraphs 43 – 44, 72, 122, 125 – 127; where 1 – k is being interpreted as a fractionally-spaced signature filter).

66. Regarding claim 32, Mottier further discloses wherein the signature filter comprises a plurality of fractionally-spaced signature filters each providing a plurality of estimated user signals, further wherein the symbol detection unit comprises a fractionally-spaced symbol detection unit receiving the plurality of estimated user signals provided by each of the plurality of fractionally-spaced signature filters (figure 2, paragraphs 8, 43 – 44, 72, 122, 125 – 127; where 1 – k is being interpreted as a fractionally-spaced).

Allowable Subject Matter

67. Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aslan Ettehadieh whose telephone number is (571) 272-8729. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aslan Ettehadieh
Examiner
Art Unit 2611

AE

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DAVID C. PAYNE
PRIMARY PATENT EXAMINER